

Application

Control of max. two control circuits. For a larger number of control circuits, several controllers can be linked by a device bus.



The TROVIS 5575 Heating and District Heating Controller is used to control max. two control circuits:

- Control of a primary heat exchanger or boiler
Max. one mixing and one non-mixing heating circuit (both weather-compensated) as well as control of the domestic hot water heating in the secondary circuit
- Control of a weather-compensated heating circuit and a domestic hot water heating with two valves in the primary circuit
- Control of two weather-compensated heating circuits with two valves in the primary circuit

Special features

- Direct access to the operating modes and essential parameters of each control circuit using rotary switches
- Intuitive data retrieval and input by pressing and turning the rotary pushbutton
- Illuminated display
- 365-day clock with max. four time schedules and automatic summer time/winter time changeover; maximum three times-of-use per day (input in steps of 15 minutes)
- Room panels may be connected for each heating circuit:
 - Convenient room panel for adjustment of the operating mode, the day and night set points, the times-of-use of the heating, the controller clock and party mode. Additional display of measured outdoor and room temperature. Connection via device bus
 - Room panel to override operating mode and day set point
- Demand-driven control via set point request of subsequent control circuits over a device bus or a 0 to 10 V signal. The primary circuit controls the maximum required flow temperature plus adjustable boost
- Application with solar thermal DHW heating available
- Instantaneous heating systems with water flowmeter configurable
- Heating characteristics either according to gradient or four points; variable limitation of the return flow temperature
- Adaptation: automatic adaptation of the heating characteristic (room temperature sensor required)
- Optimization: calculation of the best possible activation and deactivation times of the heating (room temperature sensor required)



Fig. 1 · TROVIS 5575 Heating and District Heating Controller

- Drying of jointless floors function with adjustable parameter settings
- Flash EPROM of controller (operating system) can be updated
- Configuration and parameterization either using memory module or online using USB converter 3 and TROVIS-VIEW software
- Data logging function:
 - Operating data can be saved to a data logging module
 - Data can be displayed in the data log viewer on the PC

Inputs and outputs

- 8 inputs for Pt 1000/Pt 100, PTC/Pt 100, NTC/Pt 100, Ni 1000/Pt 100 or Pt 500/Pt 100 temperature sensors and 2 binary inputs
- Three-step or on/off control circuit outputs configurable with PI control algorithm

Operation

The TROVIS 5575 Heating and District Heating Controller is adapted to the specific plant by setting the appropriate system code number. To select the appropriate code number, refer to the plant schematics described in the associated mounting and operating instructions. Additional sensors and/or function blocks which are not part of the plant's basic configuration may be selected using function blocks.

Press the changeover key \Rightarrow to get to the different levels. Configuration levels used to set function blocks are indicated by "CO". Parameter levels for experts are indicated by "PA". There is, for example, a clear distinction between two heating circuits, a domestic hot water level and the communication level.

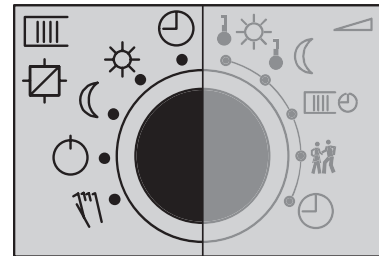
Data is retrieved and entered at the controller using a rotary pushbutton. This process is facilitated by icons displayed on the LCD. The three rotary switches are used to set the operating mode (left) and the parameters required for each circuit (right) as illustrated in Fig. 2.

Versions

- **TROVIS 5575-000x** · Standard controller with illuminated display background and with device bus
- **TROVIS 5575-001x** · Controller with illuminated display background, with device bus and an additional pump output
- **TROVIS 5575-002x** · Controller without illuminated display background and without device bus

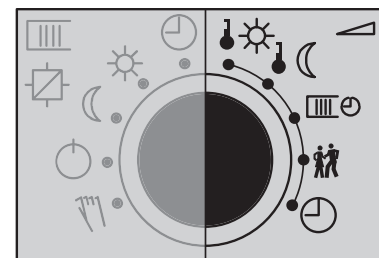
All versions can be fitted with either a standard housing base or a high base (see Figs. 3 and 4).

Operating modes



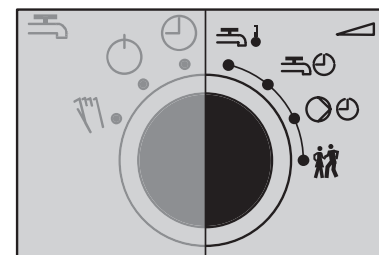
- Time-controlled operation
- Day mode (rated operation)
- Night mode (reduced operation)
- No control operation, frost protection only
- Manual mode:
Correction value adjusted in percent and pump activated/deactivated by pressing and turning the rotary pushbutton

Parameters



- Day set point
- Night set point
- Times-of-use for heating
- Party mode: setting of special times-of-use in steps of 15 minutes. Timer starts working immediately after it is set.
- Controller clock:
Setting of time, date and year

Domestic hot water circuit



- Domestic hot water temperature
- Times-of-use for domestic hot water
- Times-of-use for domestic hot water circulation pump
- Party mode: setting of one special time-of-use (one-time operation) in steps of 15 minutes. Timer starts working immediately after it is set.

Fig. 2 · Switch positions and their meaning

Technical data

Inputs	8 inputs for Pt 1000/Pt 100, PTC/Pt 100, NTC/Pt 100, Ni 1000/Pt 100 or Pt 500/Pt 100 temperature sensors and 2 binary inputs, Input terminal 03 alternatively for flow rate signal of heat meter or signal required by subsequent control circuits, 4(0) to 20 mA with 50 Ω parallel resistor or 0 to 10 V (demand: 0 to 10 V correspond to 20 to 120 °C flow temperature)
Outputs*	2 x three-step signal: load max. 250 V AC, 2A Alternatively 2 x on/off signal: load max. 250 V AC, 2 A
TROVIS 5575-000x and 5575-002x	3 x pump output: load max. 250 V AC, 2A; all outputs are relay outputs with varistor suppression
TROVIS 5575-001x	4 x pump output: load max. 250 V AC, 2A; all outputs are relay outputs with varistor suppression
Interfaces	
TROVIS 5575-000x and 5575-001x	Device bus RS-485 interface for max. 32 bus devices (2-wire system, polarity independent, connection to terminals 14/15)
Operating voltage	165 to 250 V, 48 to 62 Hz, max. 4 VA
Ambient temperature	0 to 40 °C (operation), -10 °C to 60 °C (storage and transport)
Degree of protection	IP 40 according to IEC 529
Class of protection	II according to VDE 0106
Degree of contamination	2 according to VDE 0110
Overvoltage category	II according to VDE 0110
Humidity rating	F according to VDE 40040
Noise immunity	According to EN 61000-6-1
Noise emission	According to EN 61000-6-3
Weight	Approx. 0.5 kg

* For systems with one control circuit, max. 4 pump outputs are available.

Electrical connection and installation

The controller consists of the controller housing containing the electronics and a separate terminal board for electrical connection. Two wires of max. 1.5 mm² can be connected to each terminal. The sensor connecting lines must be installed separately from the lines carrying the operating voltage. For wall mounting, screw the terminal board to the wall. After the electrical connections have been installed, place the controller housing onto the terminal board and fasten it with two screws. Two fastening brackets for panel mounting are delivered with the controller.

Ordering text

Heating and District Heating Controller **TROVIS 5575-00xx** with standard base or high housing base.

Accessories:

- Room panels
 - Type 5244 · PTC sensor with room panel
 - Type 5257-5 · Pt 1000 sensor with room panel
 - TROVIS 5570 · room panel with display
- Memory module 1400-9379
- Data logging module 1400-9378
- USB converter 3 together with data log viewer software 1400-9377
- TROVIS-VIEW Configuration and Operator Interface 6661-1011 for TROVIS 5575

Dimensions in mm

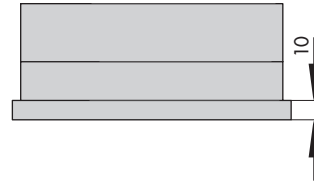
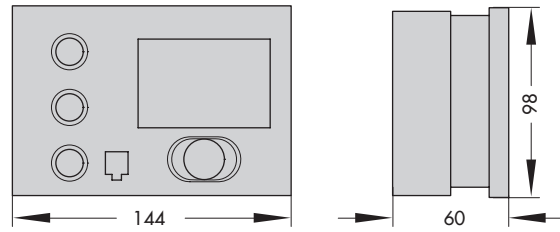


Fig. 3 · Controller with standard base

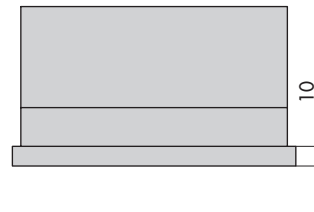
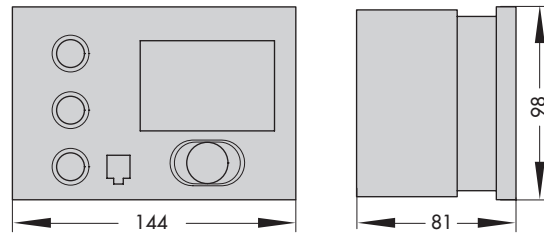
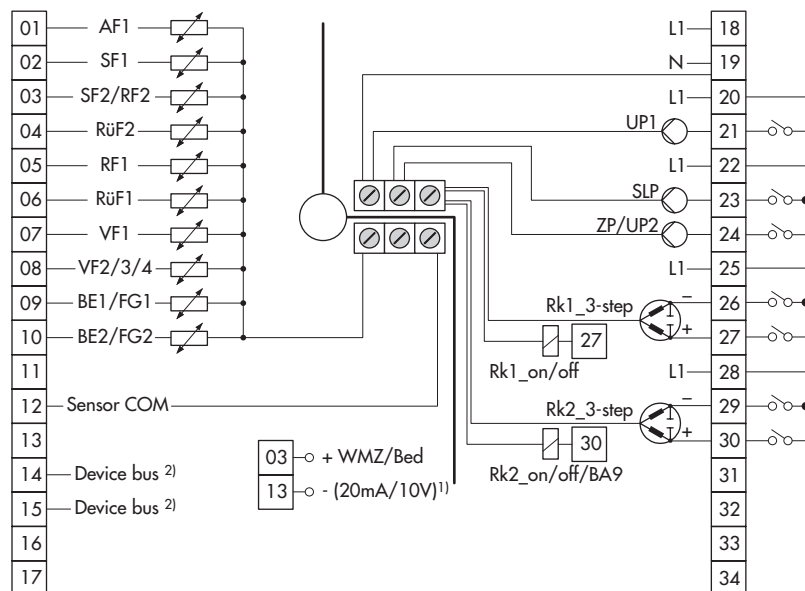


Fig. 4 · Controller with high base

Panel cut-out: 138 x 92

Terminal assignment



Attention!

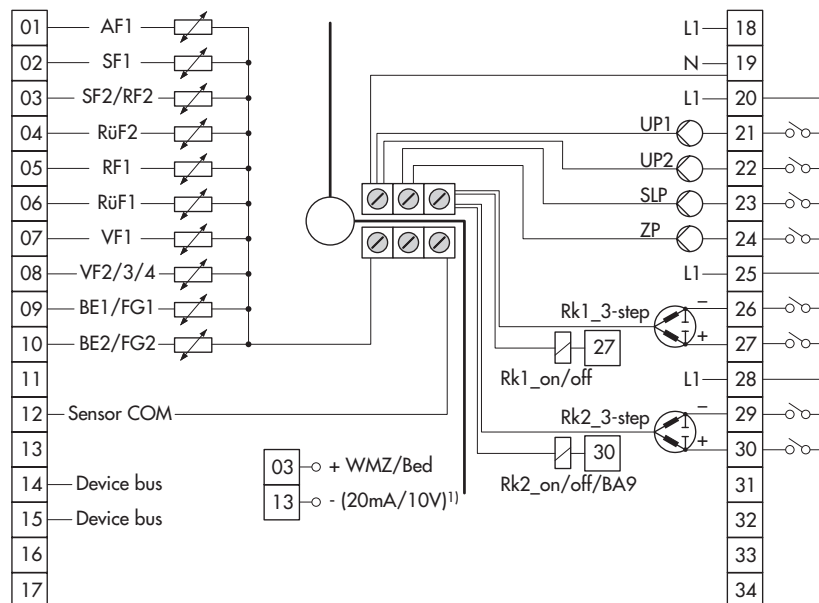
Never connect terminals 12 (ground sensor) and 13 (ground 0 to 10 V/0 to 20 mA)!

¹⁾ A 50 Ω resistor is required between terminals 03 and 13 to supply a 20 mA signal

²⁾ TROVIS 5575-000x only

Fig. 5 · Terminal assignment of TROVIS 5575-000x and TROVIS 5575-002x Controllers

AF	Outdoor temp. sensor	RF	Room temp. sensor	UP	Circulation pump (HC)
BA	Binary output	Rüf	Return flow temp. sensor	VF	Flow temp. sensor
BE	Binary input	SF	Storage sensor	WMZ	Heat meter
FG	Potentiometer	RK	Control circuit		



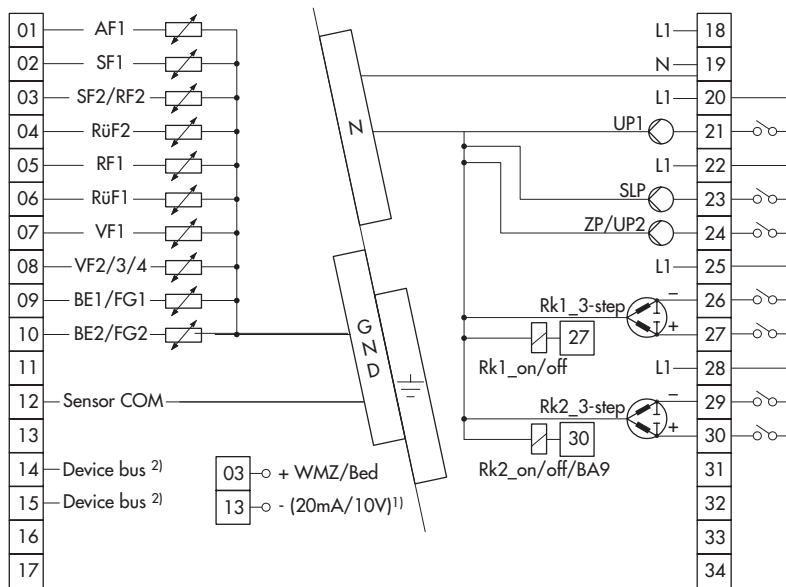
Attention!

Never connect terminals 12 (ground sensor) and 13 (ground 0 to 10 V/0 to 20 mA)!

¹⁾ A 50 Ω resistor is required between terminals 03 and 13 to supply a 20 mA signal!

Fig. 6 · Terminal assignment of TROVIS 5575-001x Controller

Terminal assignment (continued)



Attention!

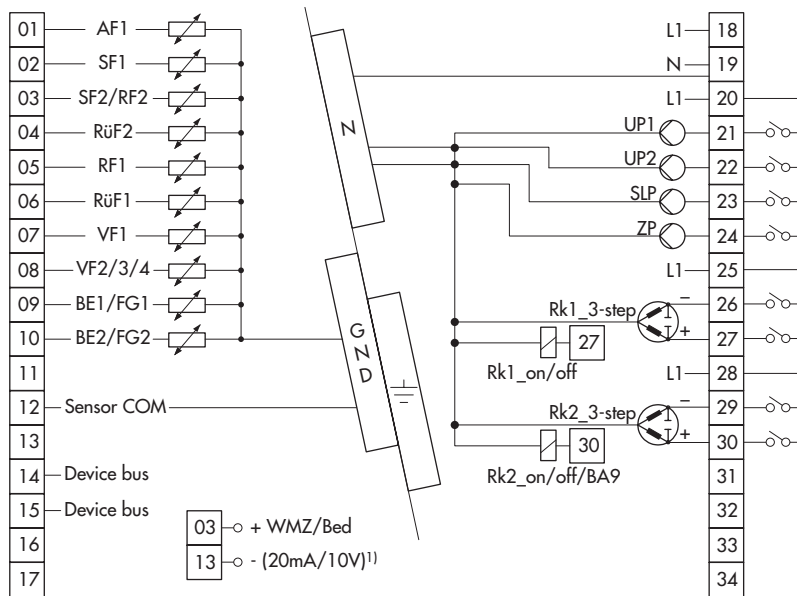
Never connect terminals 12 (ground sensor) and 13 (ground 0 to 10 V/0 to 20 mA)!

¹⁾ A 50 Ω resistor is required between terminals 03 and 13 to supply a 20 mA signal!

²⁾ TROVIS 5575-000x only

Fig. 7 · Terminal assignment of TROVIS 5575-000x and TROVIS 5575-002x with high base

AF	Outdoor temp. sensor	RF	Room temp. sensor	UP	Circulation pump (HC)
BA	Binary output	Rüf	Return flow temp. sensor	VF	Flow temp. sensor
BE	Binary input	SF	Storage sensor	WMZ	Heat meter
FG	Potentiometer	SLP	Storage charging pump	ZP	Circulation pump (DHW)



Attention!

Never connect terminals 12 (ground sensor) and 13 (ground 0 to 10 V/0 to 20 mA)!

¹⁾ A 50 Ω resistor is required between terminals 03 and 13 to supply a 20 mA signal!

Fig. 8 · Terminal assignment of TROVIS 5575-001x with high base

Specifications subject to change without notice.